CLAIMS

What is claimed is:

1. A method of processing color image data, comprising:

2   (a) examining a color component of a pixel in the image;

                      (b) selectively applying a tone map to the color component of the pixel

4   to create an output color component only when the color component is not in a

dark area of the image.

2. The method of claim 1, further comprising:

2   repeating steps (a) and (b) for essentially each pixel in the image.

3. The method of claim 1, further comprising:

2   blending the transition between pixels in the image that are in a dark

area and pixels in the image that are not in a dark area.

4. The method of claim 1 where the tone map is using a gamma correction curve.

5. A method of processing color image data contained in an array of pixels,

comprising:

               selecting at least one threshold;

               (a) reading a color component of a pixel;

               (b) transforming the color component of the pixel with a tone map

when the color component of the pixel is greater than the threshold and

otherwise preserving the color component.

6. The method of claim 5, further comprising:

2   repeating steps (a) and (b) for essentially each pixel in the array.

7. The method of claim 6 where steps (a) through (b) are repeated to create a new

2   output color component for each of the color components in the color image.

8. The method of claim 7 where a different threshold is used to create each output

2   color component in the color image.

9. The method of claim 7 where there are different tone maps for creating each

2   output color component in the color image.

10. The method of claim 5 where the threshold is approximately 20 eight bit counts.

11. The method of claim 5 where the threshold is approximately 10 eight bit counts.

12. A scanner, comprising:

2   a photo-sensor array for converting an image into an electrical signal;

                an A-to-D converter to convert the electrical signal into raw digital

4   data;

                a tone map for transforming the raw digital data into corrected digital

6   data;

the scanner configured to output the corrected digital data only when

8   the raw digital data is greater than a pre-selected value.

13. A method of processing data contained in an array of pixels, comprising:

2   defining a threshold;

        defining a range around the threshold, the range having a top end and a

4   bottom end;

        defining a tone map;

6   (a) reading a color component of a pixel;

        (b) applying the tone map to the color component when the color

8   component is above the top of the high end;

        (c) modifying the color component by interpolation when the color

10   component is below the top end of the high range and above the bottom end of

    the low range, and;

12   otherwise preserving the color component.

14. The method of claim 12 further comprising:

2   repeating steps (a) through (c) for each pixel in the array.

15. The method of claim 13 where steps (a) through (c) are repeated to create a new

2   output color component for each of the color components in the color image.

16. The method of claim 14 where a different threshold is used to create each output

2   color component in the color image.

17. A camera, comprising:

2   a photo sensor;

              a lens system that forms an image on the photo sensor;

4   a tone map for mapping image data;

              a processor configured to map image data only when the image data

6   exceeds a predetermined value.

18. A camera, comprising:

2   a photo sensor;

              a lens system that forms an image on the photo sensor;

4   a means for mapping the image data;

              a processor configured to map the image data only when the image

6   data exceeds a predetermined value.